cultivating a potato containing in [characterised by genetically engineered modification of the potato by introducing into] the genome of a [the potato] tissue of said potato a gene construct comprising a fragment of the potato gene which codes for formation of granule-bound starch synthase (GBSS gene) inserted in the anti-sense direction, wherein said fragment is selected from the group consisting of SEQ ID No. 1, SEQ ID No. 2, SEQ ID No. 3 and fragments encoding the amino acid sequences of SEQ ID No. 6-17, together with a promoter selected from the group consisting of CAMV 35S, patatin I and the GBSS promoter.

- 4. (Amended) A fragment [Fragment] of a [the] potato gene coding for granule-bound starch synthase (GBSS), wherein said fragment is selected from the group consisting of SEQ ID No. 1, SEQ ID No. 2, SEQ ID No. 3 and fragments encoding the amino acid sequences of SEQ ID No. 6-17.
- 7. (Amended) An antisense [Antisense] construct for inhibiting expression of the potato gene which codes for granule-bound starch synthase (GBSS gene) comprising
 - a) a promoter,
- b) a fragment of the potato gene coding for granule-bound starch synthase inserted in the antisense direction, wherein said fragment is selected from the group consisting of SEQ ID No. 1, <u>SEQ ID No. 2</u>, SEQ ID No. 3 and fragments encoding the amino acid sequences of SEQ ID No. 6-17.

- 8. (Amended) The antisense [Antisense] construct as claimed in claim 7, wherein [characterised in that] the promoter is an isolated promoter from the potato gene coding for granule-bound starch synthase (GBSS).
- 9. (Amended) The antisense [Antisense] construct as claimed in claim 7, wherein [characterised in that] the promoter is selected from the group consisting of the CAMV 35S promoter and the patatin I promoter.
- 10. (Amended) A vector [Vector] comprising a fragment of the potato gene coding for granule-bound starch synthase (GBSS), wherein said fragment is selected from the group consisting of SEQ ID No. 1, SEQ ID No. 2, SEQ ID No. 3 and fragments encoding the amino acid sequences of SEQ ID No. 6-17, and said fragment is inserted in the antisense direction in relation to a promoter immediately upstream from the gene fragment.
- 11. (Amended) A vector [Vector] comprising the antisense construct as claimed in claim 7.
- 12. (Amended) A cell [Cell] of a potato plant whose genome comprises the antisense construct as claimed in claim 7.
- 13. (Amended) A potato [Potato] plant whose genome comprises the antisense construct as claimed in claim 7.
- 14. (Amended) <u>A potato tuber</u> [Potato tubers] whose genome comprises the anti-sense construct as claimed in claim 7.

- 15. (Amended) A seed [Seeds] from a potato plant, whose genome comprises the antisense construct as claimed in claim 7.
- 16. (Amended) A microtuber [Microtubers] of potato, whose genome comprises the antisense construct as claimed in claim 7.
- 17. (Amended) A vector [Vector] comprising the antisense construct as claimed in claim 8.
- 18. (Amended) A cell [Cell] of a potato plant whose genome comprises the antisense construct as claimed in claim 8.
- 19. (Amended) <u>A potato</u> [Potato] plant whose genome comprises the antisense construct as claimed in claim 8.
- 20. (Amended) <u>A potato tuber</u> [Potato tubers] whose genome comprises the anti-sense construct as claimed in claim 8.
- 22. (Amended) An antisense [Antisense] construct as claimed in claim 7, wherein [characterized in that] the promoter has the sequence stated in SEQ ID No. 4.

Please add new claims 24-49 as follows:

--24. A method of suppressing amylose formation in potato, wherein the potato is modified by genetic engineering, which method comprises cultivating a potato containing in the genome of a tissue of said potato a gene construct comprising a fragment of the potato gene which codes for formation of granule-bound starch synthase (GBSS gene)

inserted in the anti-sense direction, wherein said fragment has the nucleotide sequence of SEQ ID No. 1.

- 25. A method of enhancing amylopectin formation in potato, wherein the potato is modified by genetic engineering, which method comprises cultivating a potato containing in the genome of a tissue of said potato a gene construct comprising a fragment of the potato gene which codes for formation of granule-bound starch synthase (GBSS gene) inserted in the anti-sense direction, wherein said fragment has the nucleotide sequence of SEQ ID No. 1.
- 26. A fragment of the potato gene coding for granule-bound starch synthase (GBSS), wherein said fragment has the nucleotide sequence of SEQ ID No. 1.
- 27. An antisense construct for inhibiting expression of the potato gene which codes for formation of granule-bound starch synthase (GBSS gene) comprising:
 - (a) a promoter, and
- (b) a fragment of the potato gene coding for granule-bound starch synthase inserted in the antisense direction, wherein said fragment has the nucleotide sequence of SEQ ID No. 1.
- 28. The antisense construct as claimed in claim 27, wherein the promoter is an isolated promoter from the potato gene coding for granule-bound starch synthase (GBSS).
- 29. The antisense construct as claimed in claim 27, wherein the promoter is selected from the group consisting of the CaMV 35S promoter and the patatin I promoter.

- 30. A vector comprising a fragment of the potato gene coding for granule-bound starch synthase (GBSS), wherein said fragment has the nucleotide sequence of SEQ ID No. 1.
 - 31. A vector comprising the antisense construct as claimed in claim 27.
- 32. A cell of a potato plant whose genome comprises the antisense construct as claimed in claim 27.
- 33. A potato plant whose genome comprises the antisense construct as claimed in claim 27.
- 34. A potato tuber whose genome comprises the anti-sense construct as claimed in claim 27.
- 35. A seed from a potato plant, whose genome comprises the antisense construct as claimed in claim 27.
- 36. A microtuber of a potato, whose genome comprises the antisense construct as claimed in claim 27.
- 37. A method of suppressing amylose formation in potato, wherein the potato is modified by genetic engineering, which method comprises cultivating a potato containing in the genome of a tissue of said potato a gene construct comprising a fragment of the potato gene which codes for formation of granule-bound starch synthase (GBSS gene) inserted in the anti-sense direction, wherein said fragment is of sufficient length to result in the

suppression of amylose formation when introduced into the genome of a potato tissue and said potato is cultivated.

- 38. A method of enhancing amylopectin formation in potato, wherein the potato is modified by genetic engineering, which method comprises cultivating a potato containing in the genome of a tissue of said potato a gene construct comprising a fragment of the potato gene which codes for formation of granule-bound starch synthase (GBSS gene) inserted in the anti-sense direction, wherein said fragment is of sufficient length to result in the suppression of amylose formation when introduced into the genome of a potato tissue and said potato is cultivated.
- 39. A fragment of the potato gene coding for granule-bound starch synthase (GBSS), wherein said fragment is of sufficient length to result in the suppression of amylose formation when introduced into the genome of a potato tissue and said potato is cultivated.
- 40. An antisense construct for inhibiting expression of the potato gene which codes for formation of granule-bound starch synthase (GBSS gene) comprising:
 - (a) a promoter, and
- (b) a fragment of the potato gene coding for granule-bound starch synthase inserted in the antisense direction, wherein said fragment is of sufficient length to result in the suppression of amylose formation when introduced into the genome of a potato tissue and said potato is cultivated.

- 41. The antisense construct as claimed in claim 40, wherein the promoter is an isolated promoter from the potato gene coding for granule-bound starch synthase (GBSS).
- 42. The antisense construct as claimed in claim 40, wherein the promoter is selected from the group consisting of the CaMV 35S promoter and the patatin I promoter.
- 43. A vector comprising a fragment of the potato gene coding for granule-bound starch synthase (GBSS), wherein said fragment is of sufficient length to result in the suppression of amylose formation when introduced into the genome of a potato tissue and said potato is cultivated.
 - 44. A vector comprising the antisense construct as claimed in claim 40.
- 45. A cell of a potato plant whose genome comprises the antisense construct as claimed in claim 40.
- 46. A potato plant whose genome comprises the antisense construct as claimed in claim 40.
- 47. A potato tuber whose genome comprises the anti-sense construct as claimed in claim 40.
- 48. A seed from a potato plant, whose genome comprises the antisense construct as claimed in claim 40.
- 49. A microtuber of a potato, whose genome comprises the antisense construct as claimed in claim 40.--